REMARKS

The Office Action dated June 6, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 18, 21, 25, and 27 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 1-27 are currently pending in the application and under consideration.

Claims 1, 3-11, 13-19 and 21-26 were rejected under 35 U.S.C. 103(a) as being unpatentable over Basso et al. (U.S. Patent Application No. 2003/0231640, hereinafter "Basso") in view of Edmondson (U.S. Patent Application No. 2004/0117613, hereinafter "Edmondson"). The Office Action took the position that Basso discloses all of the elements of the claims, with the exception of "defining a customer policy and device-specific commands, wherein each policy target comprise a network device that includes an interface assigned a role name associated with the customer policy." The Office Action then cited Edmondson as alledgedly disclosing this limitation of the claims. It is respectfully submitted that the claims recite subject matter that is neither disclosed nor suggested by the combination of Basso and Edmondson.

Independent claim 1, upon which claims 2-4 are dependent, recites a system that includes a policy server that is arranged to configure a customer policy including a tunnel mode. The policy server is further arranged to configure a mapping policy that maps between an experimental field and a unique per-hop-behavior. The policy server is

additionally arranged to send the mapping policy and the customer policy to interfaces of devices of a network that includes multi-protocol label switching tunnels, corresponding to the tunnels, at least one of the network devices comprising an egress interface of one of said multi-protocol label switching tunnels. The interfaces and the customer policy are associated with a same role name.

Independent claim 5, upon which claims 6-10 are dependent, recites an apparatus that includes a memory and a service application residing on the memory. The service application is arranged to configure a customer policy that comprises a tunnel group identifier and tunneling mode, the customer policy being arranged to have customer traffic mapped into multi-protocol label switching tunnels corresponding to the tunnel group identifier. The service application is arranged to configure an experimental-to-per-hop-behavior mapping policy that is arranged to map experimental fields to per-hop-behavior. The apparatus also includes a central processing facility that is arranged to translate the customer policy and mapping policy into device-neutral policy parameters. The apparatus further includes a policy consumer that is arranged to translate the device-neutral policy parameters into device-specific commands, and to send the device-specific commands to policy targets, such that the customer policy and mapping policy are implemented across at least a portion of the network. Each policy target comprises a network device, at least one of the network devices comprising an egress interface of said tunnel group.

Independent claim 11, upon which claims 12-13 are dependent, recites an apparatus that includes a means for defining a mapping policy that maps between an experimental field and a unique per-hop-behavior. The apparatus also includes a means for maintaining a customer policy, the customer policy comprising a tunnelling mode. The apparatus further includes a means for translating the mapping policy and customer policy into device-specific commands. The apparatus additionally includes a means for sending the device-specific commands to policy targets. Each policy target comprises a network device that includes an interface that is associated with a role name that is also associated with the customer policy, said interfaces including an egress interface of at least one of multi-protocol label switching tunnels.

Independent claim 14, upon which claims 15-20, recites an article that includes a storage medium, and the storage medium have instructions stored thereon. When the instructions are executed by at least one device, they result in defining a mapping policy configured to map between an EXP field and a unique PHB. They also result in defining a customer policy comprising a tunnelling mode, the customer policy being configured to govern the treatment of individual customer traffic. They further result in defining a network policy that is configured to define the Diffserv treatment of aggregated traffic. They additionally result in translating the mapping policy, the network policy and the customer policy into device-specific commands. They also result in deploying the device-specific commands to policy targets, wherein each policy target comprises a network device that includes an interface assigned a role name associated with the

customer policy, at least one interface comprising an egress interface of at least one MPLS tunnel.

Independent claim 21, upon which claims 22-27 are dependent, recites a method that includes defining a mapping policy configured to map between an experimental field and a unique per-hop-behavior. The method also includes defining a customer policy comprising a tunneling mode, the customer policy being configured to govern the treatment of individual customer traffic. The method further includes defining a network policy that is configured to define the Diffserv treatment of aggregated traffic. The method additionally includes translating the mapping policy, the network policy and the customer policy into device-specific commands. The method also includes sending the device-specific commands to policy targets. Each policy target comprises a network device that includes an interface assigned a role name associated with the customer policy, at least one of the interfaces comprising an egress interface of one of multi-protocol label switching tunnels.

The present application provides that a tunnelling mode indicating what Diffserv code point should be carried in the IP headers then packets exit on MPLS network, as to enable transport of Diffserv over MPLS. A tunneling mode is defined in the description as a method of translating the Diffserv information in MPLS headers (labels and EXP field) into DSCP values in the encapsulated IP header when packets exit the MPLS network. It is desirable for a policy to be able to determine the method of translating Diffserv information. The claimed method is also advantageous since it allows policy to

be defined and implemented across multiple network elements, which includes a definition of a tunneling mode, as well as treatment of a particular customer's traffic.

As will be discussed below, the combination of Basso and Edmondson fails to disclose or suggest all of the features of any of the presently pending claims, and, thus, fails to provide the critical and non-obvious advantages as discussed above.

Basso generally describes a method for translating a type of service field of one protocol into multiple protocols. The method may include the step of an ingress router in a Diffserv over MPLS network receiving a packet, for example, Internet Protocol (IP) packet, from an external network. The ingress router may identify the type of quality of service, for example, forward IP packet using assured forwarding, forward IP packet using expedited forwarding, in the received packet. In one embodiment, the ingress router may identify the type of quality of service by reading the type of service field in the received packet. See Abstract of Basso.

In Basso, the type of quality of service, for example, the type of service, to be performed on an IP packet in a network implementing the Diffserv protocol may be determined by the value in a Diffserv Code Point (DSCP) field located in the type of service field in the header of the IP packet. See column 3, paragraph [0029] of Basso. The program of Basso that translates a type of service field of one protocol into multiple protocols as described in FIG. 3, may reside in disk unit 220 or in application 250. It is further noted that disk unit 220 for the edge routers 121A, 121E, in network 130 may be

configured to store a table configured to store PHB values. See column 4, paragraph [0032] of Basso.

Edmondson generally describes mapping applications that generate packets to a QoS policy on a packet routed network, such as an IP network, and automatically generating and/or changing the configuration of network elements, such as routers, to treat packets from the application according to the QoS policy. The high-level descriptions of applications and quality of service (QoS) treatment, for example, are automatically translated into low-level QoS configurations for routers. The application profiles specifying how traffic for those applications should be treated can be specified by those without detailed technical knowledge and QoS configurations automatically created for download onto customer premises equipment and, if necessary, also to access and backbone networks. See abstract of Edmondson.

It is respectfully submitted that the combination of Basso and Edmondson fails to teach or suggest all of the features of the presently pending claims. For example, Basso and Edmondson fails to disclose or suggest, at least, "send the mapping policy and the customer policy to interfaces of devices of a network that includes multi-protocol label switching tunnels, corresponding to the tunnels, at least one of the network devices comprising an egress interface of one of said multi-protocol label switching tunnels, wherein the interfaces and the customer policy are associated with a same role name," as recited in independent claim 1 and similarly recited in claim 5, 11, 14, and 21.

As discussed above, Basso merely describes a method for translating a type of service field of one protocol into multiple protocols. Basso merely discloses that the method may include the step of an ingress router in a Diffserv over MPLS network receiving a packet, for example, Internet Protocol packet, from an external network. Basso merely discloses that the ingress router may identify the type of quality of service. However, Basso's system does not disclose or suggest at least one of the network devices comprising an **egress** interface of one of said MPLS tunnels. (Emphasis Added). Edmondson also fails to disclose or suggest this feature.

Therefore, the combination of Basso and Edmondson fails to teach or suggest, at least, "send the mapping policy and the customer policy to interfaces of devices of a network that includes multi-protocol label switching tunnels, corresponding to the tunnels, at least one of the network devices comprising an egress interface of one of multi-protocol label switching tunnels, wherein the interfaces and the customer policy are associated with a same role name," as recited in the presently pending claims. As such, it is respectfully requested that the rejection of claims 1, 5, 11, 14, and 21 be withdrawn.

Furthermore, it is respectfully submitted that the combination of Basso and Edmondson fails to teach or suggest, at least, "defining a customer policy comprising a tunneling mode, the customer policy being configured to govern the treatment of individual customer traffic, and translating the mapping policy, the network policy and the customer policy into device-specific commands," as recited in independent claim 21.

Basso merely disclose determining the type of quality of service in a network by the value in a Diffserv Code Point (DSCP) field located in the type of service field in the header of the IP packet, and the type of quality of service to be performed on an IP packet in a network implementing the MPLS protocol by the value in the type of service field. Edmondson also merely discloses generating packets to a QoS policy on a packet routed network. See, at least paragraph [0013] of Basso, and abstract of Edmondson. Thus, the combination of Basso and Edmondson does not define a customer policy that includes a **tunneling mode**, the customer policy being configured to govern the treatment of individual customer traffic as recited in the presently pending claims. The combination of Basso and Edmondson does not **translate** the mapping policy, the network policy and the customer policy into device-specific commands. (Emphasis Added).

Therefore, the combination of Basso and Edmondson fails to disclose or suggest all of the features of independent claim 21 and similarly recited claims 1, 5, 11, and 14. As such, it is respectfully requested that the rejection of claims 1, 5, 11, 14, and 21 be withdrawn.

Claims 2, 12, 20, and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Basso in view of Edmondson, and further in view of U.S. Patent No. 7,120,150 to Chase et al. (Chase). The Office Action took the position that Basso and Edmondson teaches some features of claims 2, 12, 20, and 27. The Office Action then cited Chase to remedy the deficiencies of claims 2, 12, 20, and 27. This rejection is respectfully traversed.

Chase generally describes an Ethernet metropolitan area network 10 that provides connectivity to one or more customer premises to packet-bases services, such as ATM, Frame Relay, or IP while advantageously providing a mechanism for assuring security and regulation of customer traffic. See abstract of Chase.

There is no motivation to combine Basso, Edmondson, and Chase because Chase does not teach or suggest a policy server and sending device-specific commands to policy targets. Further, Chase does not disclose or suggest a Diffserv network or a Diffserv over MPLS network.

Even if a person of ordinary skill combined the teachings of Chase with those of Basso and Edmondson, the person would not have arrived at the subject matter of the independent claims. The edge router taught particularly with reference to figure 6 of Chase does not map a customer descriptor to an experimental EXP field. Chase does not disclose or suggest that an MPLS QoS identifier is carried by packets in the MPLS tunnels.

Furthermore, Chase does not teach or suggest configuring an egress router of an MPLS tunnel. None of Basso, Edmondson and Chase teaches or suggests translating the mapping policy, the network policy and the customer policy into device specific commands and sending device specific commands to the policy targets. Even if the teachings of Chase combined with those of Basso and Edmondson, it would not have been obvious to a person of ordinary skill in the art to derive Basso, Edmondson and

Chase to arrive at the subject matter of the independent claims. As such, it is respectfully requested that the rejection of claims 2, 12, 20, and 27 be withdrawn.

In view the foregoing, it is respectfully asserted that the combination of Basso, Edmondson, and Chase fail to teach or suggest all of the features of independent claims 1, 5, 11, 14, and 21 and dependent claims 2-10, 13, 15-19, and 22-27.

Claims 2-4, 6-10, 12-13, 15-20, and 22-27 are dependent upon claims 1, 5, 11, 14, and 21, respectively. Accordingly, claims 2-4, 6-10, 12-13, 15-20, and 22-27 should be allowed for at least their dependence upon claims 1, 5, 11, 14, and 21, and for the specific limitations recited therein.

In view of the above, it is respectfully submitted that the claimed invention recites the subject matter which is neither disclosed or suggested in the cited prior art. Also, it is respectfully submitted that the subject matter is more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art. Applicants therefore respectfully request that each of claims 1-27 be allowed and this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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Enclosures: Petition for Extension of Time (2 Months)
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